

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listing of the claims in the application:

**LISTING OF THE CLAIMS:**

Claims 1-38 (canceled).

Claim 39. (amended) A method for finding drug development targets for obesity, osteoporosis, diabetes, osteoarthritis or hypertension comprising;

measuring the level of each protein in a proteome of a ~~biological sample~~ body fluid containing protein from a subject having a disease state of obesity, osteoporosis, diabetes, osteoarthritis or hypertension,

comparing the level of each protein to the level in a control ~~biological sample~~ body fluid,

determining which proteins are found in a statistically significant ~~abnormal amount~~ different amount compared to the control thereby indicating them to be protein markers, and

determining which of the protein markers is involved in the same metabolic pathway as said disease state, thereby indicating these to be drug development targets.

40. (withdrawn) Drug development targets determined by the method of claim 39.

41. (withdrawn) A binding reagent specific for the drug development targets of claim 39.

42. (withdrawn) The binding reagent of claim 41 bound to a detectable label.

43. (withdrawn) The drug development targets of claim 40 selected from those of Tables 1-5.

44. (withdrawn) The drug development targets of claim 43 for the diseases of obesity, osteoporosis, diabetes, osteoarthritis or hypertension.

Claims 45-55 (canceled).

56. (amended) The method of claim 39 wherein said ~~biological sample~~ body fluid and said control ~~biological sample~~ body fluid are from one or more genetically identical individuals.

57. (amended) The method of claim 56 wherein the ~~individual is a~~ individuals are human.

Claim 58 and 59 (canceled).

60. (amended) A method of identifying ~~a marker~~ markers diagnostic, prognostic, ~~or~~ indicative of appropriate therapy for a disease state or monitoring response to therapy, comprising;

a) obtaining a ~~biological sample~~ body fluid from a subject having a disease state of obesity, osteoporosis, diabetes, osteoarthritis or hypertension,

b) determining levels of proteins in the proteome in said ~~biological sample~~ body fluid,

c) comparing the levels of each protein in said proteome to levels of a corresponding protein in a control ~~sample~~ body fluid from a subject not having the disease state or a control standard,

d) determining which proteins have statistically significantly higher or lower levels in each ~~sample~~ body fluid,

wherein said markers have a statistically significantly higher or lower level in a comparison between the two ~~samples~~ body fluids.

61. (amended) The method of claim 60 wherein said ~~biological sample~~ body fluid and said control ~~biological sample~~ body fluid are from one or more genetically identical individuals.

62. (amended) The method of claim 61 wherein the ~~individual~~ individuals are human.

Claims 63-65 (canceled).

Claim 66. (new) The method of claim 39 wherein statistically significant is determined as a  $p < 0.01$ .

Claim 67. (new) The method of claim 66 wherein statistically significant is determined as a  $p < 0.001$ .

Claim 68. (new) The method of claim 60 wherein statistically significant is determined as a  $p < 0.01$ .

Claim 69. (new) The method of claim 68 wherein statistically significant is determined as a  $p < 0.001$ .

Claim 70. (new) The method of claim 39 wherein the disease state is obesity, osteoporosis, diabetes or osteoarthritis.

Claim 71. (new) The method of claim 60 wherein the disease state is obesity, osteoporosis, diabetes or osteoarthritis.

Claim 72. (new) The method of claim 39 further comprising fractionating the body fluid before said measuring the level of each protein in a proteome.

Claim 73. (new) The method of claim 72 wherein said fractionating specifically removes one or more preselected proteins from the body fluid.

Claim 74. (new) The method of claim 60 further comprising fractionating the body fluid before said determining levels of proteins in the proteome.

Claim 75. (new) The method of claim 74 wherein said fractionating specifically removes one or more preselected proteins from the body fluid.

Claim 76. (new) The method of claim 39 wherein the body fluid is a fraction of blood.

Claim 77. (new) The method of claim 60 wherein the body fluid is a fraction of blood.